

1. A C-frame motor comprising:

a stator having a plurality of electrically conductive laminations wherein said laminations have portions which define rotor apertures for receiving a rotor and portions which define radially extended projections for receiving a bobbin;

a rotor having a plurality of laminations and sized to be received within said rotor apertures of said stator laminations;

at least one bobbin having a plurality of coils comprising at least one wound electrical conductor wherein said at least one bobbin is attached to said stator lamination projections; and,

a housing configured to encompass said stator, said rotor and said at least one bobbin wherein said housing is attached to said stator.

2. The C-frame motor of claim 1, wherein said housing comprises a main housing body and an end cap.

3. The C-frame motor of claim 2, wherein the end cap has vent slots.

4. The C-frame motor of claim 1, further comprising an end plate, said end plate

configured and adapted to attach to said stator wherein said end plate has apertures for receiving mechanical fasteners.

5. The C-frame motor of claim 4, wherein said housing has portions defining at least one attachment in axial relationship with said housing body.
6. The C-frame motor of claim 5, wherein said housing is attached to said end plate with mechanical fasteners.
7. The C-frame motor of claim 1, further comprising at least one impeller.
8. The C-frame motor of claim 7, wherein said housing has a first end configured to encompass said at least one impeller such that said impeller can freely rotate within said housing.
9. The C-frame motor of claim 8, wherein said housing first end has portions defining vent slots.
10. The C-frame motor of claim 1, wherein said housing has portions defining a

bobbin extension extending radially from said housing and sized to encompass said at least one bobbin.

11. A C-frame motor comprising:

a stator having a plurality of electrically conductive laminations wherein said laminations have portions which define rotor apertures for receiving a rotor and portions which define radially extended projections for receiving a bobbin;

a rotor having a plurality of laminations and sized to be received within said rotor apertures of said stator laminations;

at least one bobbin having a plurality of coils comprising at least one wound electrical conductor wherein said at least one bobbin is attached to said stator lamination projections;

a housing configured to encompass said stator, said rotor and said at least one bobbin wherein said housing is attached to said stator, and wherein said housing comprises a main housing and an end housing.

12. The C-frame motor of claim 11, wherein said main housing has a radially extended projection provided to conform to the shape of said stator, said rotor, and said at least one bobbin.

A 13. The C-frame motor of claim 11, wherein said radially extended projection has vent slots.

14. The C-frame motor of claim 11, further comprising at least one impeller.

15. The C-frame motor of claim 14 wherein said end housing is configured to conform to the shape of said at least one impeller.

16. The C-frame motor of claim 11, wherein said end housing is matingly engaged to a first end of said main housing.

17. The C-frame motor of claim 11, wherein said end housing includes a plurality of vent holes.

18. The C-frame motor of claim 11, wherein said end housing is a solid enclosure.

19. A method of enclosing a C-frame motor comprising the steps of: providing a motor assembly having a stator, a rotor and at least one bobbin

having electrical conductor windings situated thereon;

providing an end plate wherein said end plate is adapted to attach to said stator;

A *defining an aperture*
providing a motor housing having portions configured to encompass said motor wherein said housing is attached to said motor via attachment to said end plate; and,

securing said housing to said end plate.

20. The method of claim 19, including the step of providing said housing with a *Containing vent slots and*
radially extended portion adapted to enclose said at least one bobbin.

21. The method of claim 19, including the steps of providing an impeller and providing a rotor shaft attached to said rotor whereby rotation of said rotor shaft rotates said impeller.

22. The method of claim 21, including the step of providing an end cap adapted to encompass said impeller such that said impeller can freely rotate within said end cap.

In re Gatley et al.
C-FRAME MOTOR DESIGN AND METHOD
Attorney Docket No. FASV-131-C1

23. The method of claim 22, including the step of rotating said impeller to induce air flow over said motor.

24. The method of claim 19, further including the step of maintaining an air gap of at least 0.010 inches between said housing and said motor assembly.

25. The method of claim 19, further including the step of securing said motor assembly to said housing by placing said motor assembly into said housing from an anterior end of said housing so that said motor assembly is aligned with the aperture defined by a main housing end-cap receiving portion.

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